



**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES
LARGE AIRCRAFT**

BIWEEKLY 2001-05

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U.S. Department of Transportation
Federal Aviation Administration
Regulatory Support Division
Airworthiness Programs Branch, AFS-610
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- Airworthiness Directives
- Type Certificate Data Sheets
- Special Airworthiness Information Bulletins
- Parts Manufacturers Approval Holders
- Technical Standards Order Authorized Holders
Information

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LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.			
Biweekly 2001-01			
2000-26-07		British Aerospace	BAe 146 and Avro 146-RJ Series
2000-26-08		British Aerospace	Jetstream 4101
2000-26-09		Dornier Luftfahrt	328-100 Series
2000-26-10		British Aerospace	ATP
2000-26-13		Dornier Luftfahrt	328-300 Series
2000-26-14		Airbus Industrie	A310 Series
2000-26-15	S 2000-07-02	McDonnell Douglas	MD-11 Series
2000-26-20		Gulfstream Aerospace	G-1159A (G-111) Series
Biweekly 2001-02			
2000-26-03	C S 99-27-10	Airbus Industrie	A310 Series, A300 B4-600, A300 B4-600R, and A300 F4-600R (A-300-600) Series
2001-01-01		BMW Rolls-Royce	Engine: BR700-710A1-10 and BR700-710A2-20
2001-01-02		British Aerospace	HP137 Mk1, Jetstream Series 200, and Jetstream 3101 and 3201
2001-01-03		British Aerospace	HP137 Mk1, Jetstream Series 200, and Jetstream 3101 and 3201
2001-01-05		Dassault Aviation	Falcon 10 Series and Mystere Falcon 50
2001-01-06	S 94-04-05	Airbus Industrie	A300 B2 and A300 B4 (A300), A300 B4-600, A300 B4-600R, and A300 F4-600R (A300-600) and A310 Series
2001-01-07		Airbus Industrie	A300 B2, A300 B4, A300 B4-600, A300 B4-600R, A300 F4-600R, and A310 Series
2001-01-08		British Aerospace	Jetstream 4101
2001-01-09	S 99-26-12	Airbus Industrie	A330-301, -321, and -322 Series and A340-211, -212, -213, -311, -312, and -313 Series
2001-01-10		Boeing	747-400, 747-400F, 767-200, and 767-300 Series
2001-01-12		Construcciones Aeronauticas	CN-235, CN-235-100, and CN-235-200 Series
2001-01-13		Boeing	737-300, -400, and -500 Series
2001-02-01		Boeing	737-300, -400, and -500 Series
2001-02-02		Bombardier	DHC-8-201, -202, -301, -311, and -315
2001-02-51	E	Empresa Brasileira	EMB-145 and EMB-135 Series
Biweekly 2001-03			
2000-25-51		Rolls-Royce Deutschland	Engine: BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30
2001-02-05	S 00-01-51	Bombardier	CL-600-2B16 Series (CL-604)
2001-02-06	S 97-26-06	Embraer	EMB-120 Series
2001-02-07		Boeing	767 Series
2001-02-08		Short Brothers	SD3-60 SHERPA, SD3-SHERPA, SD3-30, and SD3-60 Series
2001-02-09	S 97-06-04	Boeing	757-200 Series
2001-02-12		CFM International	Engine: CFM56-7B
2001-02-51		Embraer	EMB-145 and EMB-135 Series
2001-03-01		Israel Aircraft Industries	Galaxy Airplanes
2001-03-02		Pratt & Whitney Canada	Engine: PW306A and PW306B
2001-03-52	E	Bombardier	CL-600-2B16 (CL-604) Series
Biweekly 2001-04			
2001-03-04		Bombardier	CL-600-2B19 Series
2001-03-05		Learjet	45
2001-03-06		Raytheon Aircraft	MU-300, MU-300-10, 400, and 400A Series
2001-03-07		Airbus	A330 and A340 Series
2001-03-08	S 98-04-45	Bombardier	CL-600-2B19 Series
2001-03-09		Boeing	777 Series
2001-03-10		Boeing	747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, and 747SR Series
2001-03-11		British Aerospace	HP137 Mk1, Jetstream series 200, and Jetstream models 3101 and 3201
2001-03-12	S 99-26-18	British Aerospace	Jetstream 4101
2001-03-13		Boeing	707 Series
2001-03-14		Airbus	A300-B4-600, B4-600R, and F4-600R (Collectively Called A300-600) Series, and A300 B4 Series

LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.

Biweekly 2001-04...cont'd

2001-04-01		British Aerospace	BAe 146-100A, -200A, and -300A Series, and Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A Series
2001-04-02		Bombardier	DHC-8-100, -200, and -300 Series
2001-04-03		Embraer	EMB-145 Series
2001-04-04		Dornier Luftfahrt	228-100, 228-101, 228-200, 228-201, 228-202, and 228-212

Biweekly 2001-05

2001-03-52		Bombardier	CL-600-2B16 (CL-604) Series
2001-04-05		Raytheon Aircraft	Beech Model 1900D
2001-04-06		CFM International	Engine: CFM56-3, -3B, and -3C Series Turbofan Engines
2001-04-08		Boeing	737-600, -700, -800, and -700C Series
2001-04-09		Boeing	767 Series
2001-04-10		Pratt & Whitney Canada	Engine: PW305 and PW305A Turbofan Engines
2001-04-11		Pratt & Whitney	Engine: JT9D-7R4D, -7R4D1, -7R4E, -7R4E1 (AI-500), -7, -7A, -7AH, -7H, -7F, and -20 Series Turbofan Engines
2001-04-15		McDonnell Douglas	DC-8-31, -32, -33, -41, -42, -43, -51, -52, -53, -55, -61, -61F, -62, -62F, -63, -63F, and DC-8F-54, DC-8F-55
2001-04-16	S: 00-20-02	General Electric Company	Engine: CF6-50 Series Turbofan Engines
2001-05-05		Boeing	747 Series

BW 2001-05

**BOMBARDIER, INC.
AIRWORTHINESS DIRECTIVE
FINAL RULE OF EMERGENCY
LARGE AIRCRAFT**

2001-03-52 BOMBARDIER INC. (Formerly Canadair): Amendment 39-12125. Docket 2001-NM-27-AD.

Applicability: Model CL-600-2B16 (CL-604) series airplanes, serial numbers 5301 through 5489 inclusive; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent fuel migration under conditions of acceleration and/or climb, which could result in the airplane exceeding the aft center of gravity limit, and consequent loss of control of the airplane, accomplish the following:

Airplane Flight Manual Revision

(a) Within 5 days after the effective date of this AD, revise the Limitations and Abnormal Procedures Sections of the Canadair Challenger CL-604 Airplane Flight Manual (AFM) PSP-604-1, by inserting a copy of Canadair Challenger Temporary Revision (TR) No. 604/13, dated February 1, 2001, into the AFM.

(b) When the information in TR No. 604/13, dated February 1, 2001, has been incorporated into the FAA-approved general revisions of the AFM, the general revisions may be inserted in the AFM, and the TR may be removed from the AFM.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 1: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

NOTE 2: The subject of this AD is addressed in Canadian airworthiness directive CF-2001-07, dated February 2, 2001.

Incorporation by Reference

(d) The AFM revision shall be done in accordance with Canadair Challenger Temporary Revision No. 604/13, dated February 1, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(e) This amendment becomes effective on March 5, 2001 to all persons except those persons to whom it was made immediately effective by emergency AD 2001-03-52, issued February 2, 2001, which contained the requirements of this amendment.

2001-03-52 2

FOR FURTHER INFORMATION CONTACT: James E. Delisio, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; telephone (516) 256-7521; fax (516) 568-2716.

Issued in Renton, Washington, on February 13, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.

BW 2001-05

**RAYTHEON AIRCRAFT COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2001-04-05 RAYTHEON AIRCRAFT COMPANY: Amendment 39-12123; Docket No. 2000-CE-10-AD.

(a) What airplanes are affected by this AD? This AD affects Beech Model 1900D airplanes, serial numbers UE-156 through UE-299, that are:

- (1) certificated in any category; and
- (2) equipped with a KLN-90B Global Positioning System (GPS) incorporated in accordance with AlliedSignal Supplemental Type Certificate (STC) SA00245WI-D.

(b) Who must comply with this AD? Anyone who wishes to operate any of the above airplanes must comply with this AD.

(c) What problem does this AD address? The actions specified by this AD are intended to assure that the copilot's NAV "FLAG" displays are based on the copilot's selected NAV source. Inconsistent NAV "FLAG" displays could cause the copilot to make decisions based on an invalid GPS source without knowing it was invalid.

(d) What actions must I accomplish to address this problem? To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
Rewire the KLN-90B Global Positioning System to eliminate the possibility of inconsistent NAV "FLAG" displays.	Within the next 400 hours time-in-service (TIS) after April 9, 2001 (the effective date of this AD), unless already accomplished.	In accordance with the ACCOMPLISHMENT INSTRUCTIONS section of Raytheon Mandatory Service Bulletin SB 34-3222, Issued: January, 2000.

(e) Can I comply with this AD in any other way? You may use an alternative method of compliance or adjust the compliance time if:

- (1) Your alternative method of compliance provides an equivalent level of safety; and
- (2) The Manager, Wichita Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

Note 1: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) Where can I get information about any already-approved alternative methods of compliance? Contact Todd Dixon, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4152; facsimile: (316) 946-4407.

(g) What if I need to fly the airplane to another location to comply with this AD? The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(h) Are any service bulletins incorporated into this AD by reference? Actions required by this AD must be done in accordance with Raytheon Mandatory Service Bulletin SB 34-3222, Issued: January, 2000. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You can get copies from the Raytheon Aircraft Company, PO Box 85, Wichita, Kansas 67201-0085. You can look at copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(i) When does this amendment become effective? This amendment becomes effective on April 9, 2001.

FOR FURTHER INFORMATION CONTACT: Todd Dixon, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 Airport Road, Mid-Continent Airport, Wichita, Kansas 67209; telephone: (316) 946-4152; facsimile: (316) 946-4407.

Issued in Kansas City, Missouri, on February 8, 2001.

Michael Gallagher, Manager, Small Airplane Directorate, Aircraft Certification Service.

BW 2001-05

**CFM INTERNATIONAL
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2001-04-06 CFM International: Amendment 39-12124. Docket 98-ANE-57-AD.

Applicability: CFM International, S.A.(CFMI) CFM56-3, -3B, and -3C series turbofan engines, installed on but not limited to Boeing 737 series aircraft.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (l) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fan disk failure, which could result in an uncontained engine failure and damage to the aircraft, accomplish the following:

Wear Measurement (Thrust Rating Category A Only)

(a) For CFM56-3, -3B, and -3C series engines operating at the category A thrust rating on the effective date of this AD that have never previously operated at the category B or C thrust ratings, perform a one time fan disk dovetail wear measurement in accordance with section 2.B. (1) of Service Bulletin (SB) CFMI CFM56-3/-3B/-3C, No. 72-854, Revision 1, dated August 7, 1998, or section 2.B.(1) of SB CFMI CFM56-3/-3B/-3C, No. 72-854, Revision 2, dated November 29, 1999, using the intervals defined in section 1.D.(1)(a)(1) and 1.D.(1)(a)(2) of the SB's, and the current fan disk time and cycles on the effective date of the AD.

Inspection

(1) Perform a local ultrasonic inspection for cracks in the fan disk in accordance with section 2.B.(2) of the SB, if required by the wear criteria described in section 1.D.(1)(b)1 of the SB.

Removal

(i) Remove from service prior to further flight fan disks that do not meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, and replace with a serviceable part.

(ii) Remove from service within 50 cycles-in-service (CIS), fan disks that meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, if the wear measurement is greater than or equal to 9 mils.

(2) Install dampers, as required, in accordance with the compliance times and criteria described in section 1.D.(1)(b)1 of the SB.

Wear Measurement (Thrust Rating Category A, if the Engine was Previously Operated at Thrust Rating Categories B or C)

(b) For CFM56-3, -3B, and -3C series engines operating at the category A thrust rating on the effective date of this AD that have previously operated at the category B or category C thrust ratings, perform a one-time fan disk dovetail wear measurement in accordance with section 2.B.(1) of SB CFMI CFM56-3/-3B/-3C, No. 72-854, Revision 1, dated August 7, 1998, or section 2.B.(1) of SB CFMI CFM56-3/-3B/-3C, No. 72-854, Revision 2, dated November 29, 1999, using the intervals defined in section 1.D.(1)(a)(1) and 1.D.(1)(a)(2) of the SB's, and the current fan disk time and cycles on the effective date of the AD.

Inspection

(1) Perform a local ultrasonic inspection for cracks in the fan disk in accordance with section 2.B.(2) of the SB, if required by the wear criteria described in section 1.D.(1)(b)2 of the SB.

Removal

(i) Remove from service prior to further flight fan disks that do not meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, and replace with a serviceable part.

(ii) Remove from service within 50 CIS, fan disks that meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, if the wear measurement is greater than or equal to 9 mils.

(2) Install dampers, as required, in accordance with the compliance times and criteria described in section 1.D.(1)(b)2 of the SB.

Wear Measurement (Thrust Rating Category B, Regardless of Whether the Engine was Previously Operated at Thrust Rating Categories A or C)

(c) For CFM56-3B and -3C series engines operating at the category B thrust rating on the effective date of this AD, regardless of whether the engine was previously operated at thrust rating categories A or C, perform a one-time fan disk dovetail wear measurement in accordance with section 2.B.(1) of CFMI CFM56-3/-3B/-3C Service Bulletin (SB) No. 72-854, Revision 1, dated August 7, 1998, or section 2.B.(1) of CFMI CFM56-3/-3B/-3C SB No. 72-854, Revision 2, dated November 29, 1999, using the intervals defined in section 1.D.(1)(a)(1) and 1.D.(1)(a)(2) of the SB's, and the current fan disk time and cycles on the effective date of the AD.

Inspection

(1) Perform a local ultrasonic inspection for cracks in the fan disk in accordance with section 2.B.(2) of the SB, if required by the wear criteria described in section 1.D.(1)(c) of the SB.

Removal

(i) Remove from service prior to further flight fan disks that do not meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, and replace with a serviceable part.

(ii) Remove from service within 50 CIS, fan disks that meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, if the wear measurement is greater than or equal to 9 mils.

(2) Remove and replace fan blades and install dampers, as required, in accordance with the compliance times and criteria described in section 1.D.(1)(c) of the SB.

Wear Measurement (Thrust Rating Category C, Regardless of Whether the Engine was Previously Operated at Thrust Rating Categories A or B)

(d) For CFM56-3C series engines operating at the category C thrust rating on the effective date of this AD, regardless of whether the engine was previously operated at category A or B thrust ratings, perform a one-time fan disk dovetail wear measurement in accordance with section 2.B.(1) of SB CFMI CFM56-3/-3B/-3C, No. 72-854, Revision 1, dated August 7, 1998, or section 2.B.(1) of SB CFMI CFM56-3/-3B/-3C SB, No. 72-854, Revision 2, dated November 29, 1999, using the intervals defined in section 1.D.(1)(a)(1) and 1.D.(1)(a)(2) of the SB's and the current fan disk time and cycles on the effective date of the AD.

Inspection

(1) Perform a local ultrasonic inspection for cracks in the fan disk in accordance with section 2.B.(2) of the SB, if required by the wear criteria described in section 1.D.(1)(d) of the SB.

Removal

(i) Remove from service prior to further flight fan disks that do not meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, and replace with a serviceable part.

(ii) Remove from service within 50 CIS, fan disks that meet the ultrasonic inspection criteria defined in paragraph 2.B.(2) (d) 8b of the SB, if the wear measurement is greater than or equal to 5 mils.

(2) [Reserved]

Cleaning and Lubrication of Fan Disk/Blade

(e) If the fan disk is determined to be serviceable, clean and lubricate the fan disk and fan blades using the instructions in paragraph 2.B.(2)(d) 8 d of the SB.

Definitions

(f) The category A, B, and C thrust ratings listed in paragraphs (a) through (d) of this AD are defined in chapter 05 of the CFM56-3 model series Engine Shop Manual, CFMI-TP.SM.5.

Lubricants

(g) After the effective date of this AD, the following lubricants are no longer approved for use on the CFMI CFM56-3, -3B, and -3C series engines: Sandstrom 27A, ZIP D5460, Surf-kote A 1625, Tiolube 70 and Tiolube 75/75.

When Inspection is NOT required

(h) The actions required by paragraphs (a), (b), (c), and (d), (e) of this AD are not required if the fan disk has been equipped with configurations (1) or (2) below prior to reaching 3,000 cycles-since-new, or 5,250 hours-since-new, whichever occurs first, and has never been relubricated using one of the lubricants identified in paragraph (g) of this AD:

(1) For fan disks operating at a thrust rating of 20,000 pounds or less, the fan disk has either 25° fan blades with dampers or 37° fan blades with or without dampers.

(2) For fan disks operating at a thrust rating of more than 20,000 pounds, the fan disk has 37° fan blades with dampers.

(i) Inspection is not required for fan disks that used lubricants identified in paragraph (g) but were then rebroached prior to exceeding the .004 inch wear limit, then were not lubricated with the lubricants identified in paragraph (g) AND were equipped with fan blade configurations specified either in sub-paragraph (h) (1) or (h) (2).

(j) Inspection is also not required for fan disks that were inspected to and within Engine Shop Manual limits of .004 inch wear limit, then were not lubricated with the lubricants identified in paragraph (g) AND were equipped with fan blade configurations specified either in sub-paragraph (h)(1) or (h)(2).

When Inspection can wait until 20,000 cycles-since-new (CSN)/ 35,000 time-since-new (TSN)

(k) For disks that have never been relubricated since first manufacture using one of the lubricants identified in paragraph (g) of this AD, the inspections required by paragraphs (a), (b), (c), and (d) of this AD are required at 20,000 CSN or 35,000 hours TSN, whichever occurs first.

Alternative Methods of Compliance

(l) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Ferry Flights

(m) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Incorporation By Reference Material

(n) The FAA has reviewed and approved the technical content of the listed CFMI SBs. The actions required by this AD shall be done in accordance with the following CFMI SBs:

Document No.	Pages	Revision	Date
CFM56-3/-3B/-3C SB No. 72-854	1-39	1	August 7, 1998
Total pages: 39			
CFM56-3/-3B/-3C SB No. 72-854	1-40	2	November 29, 1999
Total pages: 40			

The incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552 (a) and 1 CFR part 51. Copies may be obtained from CFM International, Technical Publications Department, 1 Neumann Way, Cincinnati, OH 45215; telephone: (513) 552-2800, fax: (513) 552-2816. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA 01803-5299; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(o) This amendment becomes effective on April 4, 2001.

FOR FURTHER INFORMATION CONTACT: Glorianne Niebuhr, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7132, fax (781) 238-7199.

Issued in Burlington, Massachusetts, on February 12, 2001.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

BW 2001-05

BOEING AIRWORTHINESS DIRECTIVE LARGE AIRCRAFT

2001-04-08 BOEING: Amendment 39-12127. Docket 2001-NM-13-AD.

Applicability: Model 737-600, -700, -800, and -700C series airplanes, as listed in Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent excessive in-flight vibrations of the elevator tab, which could lead to loss of the elevator tab and reduced controllability of the airplane, do the following:

Initial and Repetitive Inspections, and Corrective Actions (Work Package I)

(a) Within 30 days or 100 flight cycles after the effective date of this AD, whichever occurs later: Inspect the elevator tab, as specified in the Accomplishment Instructions for Work Package I of Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001, to detect any damage or discrepancy per the service bulletin.

(1) If no damage or discrepancy (including loose or missing parts, or excessive wear) is found, repeat the inspections required by paragraph (a) of this AD thereafter at intervals not to exceed 250 flight cycles.

(2) Except as provided by paragraph (d) of this AD, if any damage or discrepancy is found, before further flight, do the corrective actions (including follow-on inspections; replacing, reworking, repairing, and lubricating parts; applying inspection putty; cleaning; and aligning and torquing components) specified in Figure 1 of the service bulletin, as applicable. Repeat the inspections required by paragraph (a) of this AD thereafter at intervals not to exceed 250 flight cycles.

One-Time Freeplay Inspections and Corrective Actions (Work Package II)

(b) Within 90 days after the effective date of this AD, or before the accumulation of 750 total flight cycles after airplane delivery, whichever occurs later: Do the one-time free-play inspections of the elevator tab, as specified in the Accomplishment Instructions for Work Package II of Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001, to detect any damage or discrepancy per the service bulletin.

(1) If no damage or discrepancy is found, no further action is required by this paragraph.

(2) If any damage or discrepancy is found, before further flight, do the corrective actions specified in Figures 2 and 3 of the service bulletin, as applicable.

Repetitive Inspections and Corrective Actions (Work Package III)

(c) Within 1,500 flight hours or 750 flight cycles, whichever occurs earlier, after doing Work Package II: Inspect the elevator tab, as specified in the Accomplishment Instructions for Work Package III of Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001, to detect any damage or discrepancy per the service bulletin.

(1) If no damage or discrepancy is found, repeat the inspections required by paragraph (c) of this AD thereafter at intervals not to exceed 1,500 flight hours or 750 flight cycles, whichever occurs earlier.

(2) If any damage or discrepancy is found, before further flight, do the applicable corrective actions specified in Figure 2, as specified by the Accomplishment Instructions for Work Package III, of the service bulletin.

Repair

(d) Repair any damage or discrepancy of the elevator tab assembly that is outside the limits specified by the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001, per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Incorporation by Reference

(g) Except as provided by paragraph (d) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 737-55A1072, Revision 1, including Appendix A, dated January 11, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on March 20, 2001.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2028; fax (425) 227-1181.

Issued in Renton, Washington, on February 21, 2001.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

BW 2001-05

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2001-04-09 BOEING: Amendment 39-12128. Docket 2000-NM-416-AD.

Applicability: All Model 767 series airplanes, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent continued operation with yielded or failed shear rivets on a bellcrank assembly for the elevator power control actuator (PCA), which could result in reduced controllability of the airplane, accomplish the following:

Repetitive Tests

(a) Within 90 days after the effective date of this AD, perform a test of the elevator PCA bellcranks to determine if an elevator PCA is rigged incorrectly due to yielded or failed shear rivets in a bellcrank assembly, per Boeing Alert Service Bulletin 767-27A0168 (for Model 767-200, -300, and -300F series airplanes), or 767-27A0169 (for Model 767-400ER series airplanes), both dated November 21, 2000; as applicable. Repeat the test thereafter at least every 400 flight hours. Accomplishment of these repetitive tests is acceptable for compliance with the functional check of the elevator system required by a Certification Maintenance Requirement that is documented as Item Number 27-31-00-5B in the Boeing 767 Maintenance Planning Document.

Follow-on Actions

(b) If an elevator PCA is determined to be rigged incorrectly during any test per paragraph (a) of this AD, before further flight, do a one-time inspection to measure penetration depth of shear rivets of all three elevator bellcrank assemblies of the affected elevator surface, per Boeing Alert Service Bulletin 767-27A0168 (for Model 767-200, -300, and -300F series airplanes), or 767-27A0169 (for Model 767-400ER series airplanes), both dated November 21, 2000; as applicable.

(1) If the measured penetration depth of the shear rivets on all bellcrank assemblies is 0.50 inch or more: Before further flight, re-rig the elevator PCA correctly per the applicable service bulletin.

(2) If the measured shear rivet penetration depth on any single bellcrank assembly is less than 0.50 inch: Before further flight, repair the bellcrank assembly by replacing the shear rivets or replace the bellcrank assembly, and reassemble and re-rig the elevator control system, per the applicable service bulletin. Then, do paragraph (c) of this AD.

Reporting Requirement (On-Condition)

(c) If the penetration depth of any of the shear rivets is less than 0.50 inch, submit a report of inspection findings to the Manager, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; fax (425) 227-1181. Submit the report at the applicable time specified in paragraph (c)(1) or (c)(2) of this AD. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(1) For airplanes on which the inspection is done after the effective date of this AD: Submit the report within 15 days after doing the inspection required by paragraph (b) of this AD.

(2) For airplanes on which the inspection was done prior to the effective date of this AD: Submit the report within 10 days after the effective date of this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except per paragraph (c) of this AD, the actions shall be done per Boeing Alert Service Bulletin 767-27A0168, dated November 21, 2000, or Boeing Alert Service Bulletin 767-27A0169, dated November 21, 2000; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on March 20, 2001.

FOR FURTHER INFORMATION CONTACT: Kenneth J. Fairhurst, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1118; fax (425) 227-1181.

Issued in Renton, Washington, on February 21, 2001.

Charles D. Huber, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

BW 2001-05

PRATT & WHITNEY CANADA AIRWORTHINESS DIRECTIVE ENGINE LARGE AIRCRAFT

2001-04-10 Pratt & Whitney Canada: Amendment 39-12129. Docket 2000-NE-24-AD.

Applicability Pratt & Whitney Canada (PWC) Models PW305 and PW305A turbofan engines with stage 4 low pressure turbine (LPT) disks, part numbers (P/N's) 30A1457 and 30A1499. These engines are installed on but not limited to British Aerospace BAe. 125 1000A, BAe. 125 1000B, Hawker 1000, and Learjet 60 series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance Required as indicated, unless accomplished previously.

To prevent premature LPT disk failure due to cracking of the LPT disks, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

New Stage 4 LPT Disk Life Limit

(a) Remove stage 4 LPT disks, P/N's 30A1457 and 30A1499, prior to exceeding the new life limit of 4000 cycles-in-service (CIS).

(b) Except for the provisions of paragraph (c) of this AD, no parts, identified by P/N in paragraph (a) of this AD, that exceed the new life limit of 4000 CIS, may be installed.

Alternative Method of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

2001-04-10 2

Effective Date

(e) This amendment becomes effective on April 6, 2001.

FOR FURTHER INFORMATION CONTACT: James Rosa, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: (781) 238-7152; fax (781) 238-7199.

Issued in Burlington, Massachusetts, on February 21, 2001.

David A. Downey, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

BW 2001-05

PRATT & WHITNEY AIRWORTHINESS DIRECTIVE ENGINE LARGE AIRCRAFT

2001-04-11 Pratt & Whitney. Amendment 39-12130. Docket No. 99-NE-56-AD.

Applicability: Pratt & Whitney (PW) JT9D-7R4D, -7R4D1, -7R4E, -7R4E1 (AI-500), -7, -7A, -7AH, -7H, -7F, and -20 series turbofan engines, installed on but not limited to Boeing 747 and 767 series, McDonnell Douglas DC-10 series, and Airbus Industrie A310 series aircraft.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent 1st stage high pressure turbine (HPT) disk cracking, which could result in an uncontained engine failure and damage to the aircraft, accomplish the following:

JT9D Series

(a) For PW JT9D-7, -7A, -7AH, -7H, -7F, and -20 series turbofan engines, with 1st stage HPT disks, part numbers (P/Ns) 761401, 811401, 823401, 825601, 826001, and 826301:

Initial Inspection

(1) Perform the initial detailed eddy current inspection (ECI) for cracks in accordance with the Accomplishment Instructions of PW Alert Service Bulletin (ASB) No. JT9D A6367, dated July 28, 1999.

(2) Inspect at the following compliance times, depending on whether parts have had prior fluorescent penetrant inspections (FPI) or not.

Initial Compliance Times

No Prior FPI

(3) The following are the initial compliance times for parts that have had no prior FPI:

(i) For disks with more than 8,000 total part cycles-since-new (CSN) on the effective date of this AD, inspect within 250 cycles-in-service (CIS) after the effective date of this AD.

(ii) For disks with at least 6,000 CSN though no more than 8,000 total part CSN on the effective date of this AD, inspect within 1,000 CIS after the effective date of this AD.

(iii) For disks with at least 4,000 CSN though no more than 5,999 total part CSN on the effective date of this AD, inspect within 2,000 CIS after the effective date of this AD.

(iv) For disks with less than 4,000 total part CSN on the effective date of this AD, inspect prior to accumulating 6,000 total part CSN.

Prior FPI Accomplished

(4) The following are the initial compliance times for parts that have had a previous FPI:

(i) For disks with more than 8,000 CIS since last FPI on the effective date of this AD, inspect within 250 CIS after the effective date of this AD.

(ii) For disks with at least 6,000 CIS though no more than 8,000 CIS since last FPI on the effective date of this AD, inspect within 1,000 CIS after the effective date of this AD.

(iii) For disks with at least 4,000 CIS though no more than 5,999 CIS since last FPI on the effective date of this AD, inspect within 2,000 CIS after the effective date of this AD.

(iv) For disks with less than 4,000 CIS since last FPI on the effective date of this AD, inspect prior to accumulating 6,000 CIS since last FPI on the effective date of this AD.

Repetitive Inspections

(5) Thereafter, perform detailed ECI for cracks:

(i) At intervals not to exceed 6,000 CIS since last ECI.

(ii) Inspect in accordance with the Accomplishment Instructions of PW ASB No. JT9D A6367, dated July 28, 1999.

Cracked Disks

(6) Prior to further flight, replace cracked disks with serviceable parts.

JT9D-7R4 Series

(b) For PW JT9D-7R4D, -7R4D1, -7R4E, and -7R4E1 (AI-500) series turbofan engines, with 1st stage HPT disks, P/N 825601:

Initial Inspection

(1) Perform the initial detailed ECI for cracks in accordance with the Accomplishment Instructions of PW ASB No. JT9D-7R4-A72-563, dated July 28, 1999.

(2) Inspect at the following compliance times, depending on whether parts have had prior FPI or not.

Initial Compliance Times

No Prior FPI

(3) The following are the initial compliance times for parts that have had no prior FPI:

(i) For disks with more than 10,000 total part CSN on the effective date of this AD, inspect within 250 CIS after the effective date of this AD.

(ii) For disks with at least 8,000 CSN though no more than 10,000 total part CSN on the effective date of this AD, inspect within 1,000 CIS after the effective date of this AD.

(iii) For disks with at least 6,000 CSN though no more than 7,999 total part CSN on the effective date of this AD, inspect within 2,000 CIS after the effective date of this AD.

(iv) For disks with less than 6,000 total part CSN on the effective date of this AD, inspect prior to accumulating 8,000 total part CSN.

Prior FPI Accomplished

(4) The following are the initial compliance times for parts that have had a previous FPI:

(i) For disks with more than 10,000 CIS since last FPI on the effective date of this AD, inspect within 250 CIS after the effective date of this AD.

(ii) For disks with at least 8,000 CIS though no more than 10,000 CIS since last FPI on the effective date of this AD, inspect within 1,000 CIS after the effective date of this AD.

(iii) For disks with at least 6,000 CIS though no more than 7,999 CIS since last FPI on the effective date of this AD, inspect within 2,000 CIS after the effective date of this AD.

(iv) For disks with less than 6,000 CIS since last FPI on the effective date of this AD, inspect prior to accumulating 8,000 CIS since last FPI on the effective date of this AD.

Repetitive Inspections

(5) Thereafter, perform detailed ECI for cracks:

(i) At intervals not to exceed 8,000 CIS since last ECI.

(ii) Inspect in accordance with the Accomplishment Instructions of PW ASB No. JT9D-7R4-A72-563, dated July 28, 1999.

Cracked Disks

(6) Prior to further flight, replace cracked disks with serviceable parts.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Ferry Flights

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the inspection requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions required by this AD must be done in accordance with the following Pratt & Whitney Alert Service Bulletins:

Document No.	Pages	Revision	Date
JT9D A6367	1-12	Original	July 28, 1999
Total pages:12			
JT9D-7R4-A72-563	1-37	Original	July 28, 1999
Total pages: 37			

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Pratt & Whitney, 400 Main Street, East Hartford, CT 06108; telephone: 860 565-6600, fax: 860 565-4503. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(f) This amendment becomes effective on May 7, 2001.

FOR FURTHER INFORMATION CONTACT: Wego Wang, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781-238-7134, fax: 781-238-7199.

Issued in Burlington, Massachusetts, on February 21, 2001.

David A. Downey, Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

BW 2001-05

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2001-04-15 MCDONNELL DOUGLAS: Amendment 39-12135. Docket 2001-NM-26-AD.

Applicability: The following Model DC-8 series airplanes that have been modified in accordance with Supplemental Type Certificate (STC) ST466CH, certificated in any category:

DC-8-31	DC-8-32	DC-8-33
DC-8-41	DC-8-42	DC-8-43
DC-8-51	DC-8-52	DC-8-53
DC-8-55	DC-8-61	DC-8-61F
DC-8-62	DC-8-62F	DC-8-63
DC-8-63F	DC-8F-54	DC-8F-55

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent the pitot lines from freezing, which could result in erroneous or total loss of airspeed indications to the flight crew, and consequent loss of control of the airplane, accomplish the following:

Modification

(a) Within 30 days after the effective date of this AD, modify the flow control system to reroute the bleed air ducts, in accordance with National Aircraft Service, Inc., Service Bulletin SB-98-01R1, dated January 26, 1999.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Chicago Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Chicago ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The actions shall be done in accordance with National Aircraft Service, Inc., Service Bulletin SB-98-01R1, dated January 26, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from National Aircraft Service, Inc., 9133 Tecumseh-Clinton Road, Tecumseh, Michigan 49286. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Chicago Aircraft Certification Office, 2330 East Devon Avenue, Room 323, Des Plaines, Illinois; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(e) This amendment becomes effective on March 21, 2001.

FOR FURTHER INFORMATION CONTACT: Roy Boffo, Aerospace Engineer, Systems and Flight Test Branch, ACE-117C, FAA, Chicago Aircraft Certification Office, 2350 East Devon Avenue, Room 323, Des Plaines, Illinois 60018; telephone (847) 294-7564; fax (847) 294-7834.

Issued in Renton, Washington, on February 22, 2001.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

BW 2001-05

GENERAL ELECTRIC COMPANY AIRWORTHINESS DIRECTIVE ENGINE LARGE AIRCRAFT

2001-04-16 General Electric Company: Amendment 39-12136. Docket No. 2000-NE-38-AD. Supersedes AD 2000-20-02, Amendment 39-11913.

Applicability

This airworthiness directive (AD) is applicable to General Electric Company (GE) CF6-50 series turbofan engines. These engines are installed on, but not limited to, Airbus Industries A300, Boeing Airplane Company 747, and McDonnell Douglas Corporation DC10 airplanes.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (l) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated, unless already done.

To detect cracked, loose, or missing stage 2 low pressure turbine (LPT) nozzle lock assembly studs that could lead to failure of the locks, segment rotation, LPT case machining, and subsequent uncontained failure of the engine, do the following:

Installation of Solid Borescope Plug

(a) For engines that have not already complied with paragraph (e) of AD 2000-20-02, install a stage 2 LPT solid borescope inspection plug part number (P/N) 2083M99P01, or a plug with the alternate P/N's 305-381-303-0 or 2110M79P01, before further flight, unless paragraph (e)(1) (GE Alert Service Bulletin (ASB) CF6-50 72-A1201, or CF6-50 72-A1201, Revision 1) of this AD has already been accomplished.

Visual Inspection of Stage 2 Nozzle Lock Assemblies

(b) For engines with stage 2 LPT Rene 41 nozzle lock assemblies, visually inspect locks for loose or missing studs, in accordance with Paragraph 3.B., Accomplishment Instructions of GE ASB CF6-50 72-A1197, dated December 14, 2000, within the following times:

Table 1. Rene 41 Stage 2 Nozzle Lock Assemblies

Time On Rene 41 Lock Assembly	Inspect Within	Repetitive Inspect Within
(1) Less than 4,000 hours time-since-new (TSN) on the effective date of this AD.	750 hours after accumulating 4,000 hours TSN.	750 hours time-since-last inspection (TSLI).
(2) 4,000 hours TSN or greater, or if TSN is not known, on the effective date of this AD.	750 hours TIS after the effective date of this AD.	750 hours TSLI.

(c) For engines with stage 2 LPT Waspalloy nozzle lock assemblies, visually inspect for loose or missing studs within the following times:

Table 2. Waspalloy Stage 2 Nozzle Lock Assemblies

Time On Stage 2 Waspalloy Lock Assembly	Initial Inspect Within	Repetitive Inspect Within
(1) Less than 1,250 hours TSN on the effective date of this AD.	750 hours after accumulating 1,250 hours TSN.	750 hours TSLI.
(2) Greater than or equal to 1,250 hours TSN, but less than 4,000 hours TSN on the effective date of this AD.	750 hours TIS after the effective date of this AD.	750 hours TSLI.
(3) 4,000 hours TSN or greater, on the effective date of this AD, or, if hours unknown.	250 hours TIS after the effective date of this AD.	750 hours TSLI.

Ultrasonic Inspection of Stage 2 LPT Waspalloy Nozzle Lock Assemblies

(d) For engines with stage 2 LPT Waspalloy nozzle lock assemblies with no loose or missing studs found in accordance with paragraph (c) of this AD, ultrasonically inspect studs for cracks in accordance with Paragraph 3.A., Accomplishment Instructions of GE ASB CF6-50 72-A1197, dated December 14, 2000, within the times identified in paragraph (c) of this AD.

Corrective Action

(e) For engines with either stage 2 LPT Rene 41 or Waspalloy nozzle lock assemblies where the assembly studs are found loose or missing, do one of the following:

(1) Prior to further flight, modify the LPT case and install new design nozzle locks as specified in GE ASB CF6-50 72-A1201, dated December 22, 2000, or CF6-50 72-A1201, Revision 1, dated February 6, 2001.

OR,

(2) Prior to further flight, as an interim on-wing action for stage 2 LPT nozzle locks only, modify the LPT case and install seven additional nozzle locks as specified in GE service bulletin CF6-50 72-1203, dated November 22, 2000, or CF6-50 72-1203, Revision 1, dated February 7, 2001, providing the following conditions are met prior to modification:

- (i) There are no cracks or distortion in the stage 2 borescope plug area of the LPT case.
- (ii) The borescope plug is able to be removed.
- (iii) There is no evidence of stage 2 nozzle segment rotation, as evidenced by a borescope inspection that reveals that no nozzle segment circumferential gap is greater than 0.250 inch.

(f) For engines with stage 2 LPT nozzle lock assemblies modified in accordance with paragraph (e)(2) of this AD, perform the following inspections every 750 hours TIS, until the engine is modified in accordance with paragraph (e)(1) of this AD:

- (1) Repetitive visual inspections of the seven additional nozzle locks for loose or missing locks.
- (2) Repetitive visual inspections of the LPT case in the area of the additional locks for cracks.
- (3) Repetitive visual inspections of the LPT case in the area of the borescope plug for cracks.

Note 2: Modification of the LPT case and installation of the additional locks per paragraph (e)(2) of this AD should not be performed by the same individual for all engines installed on the same airplane prior to the same flight.

(g) Engines rejected by the inspections in paragraph (f) of this AD are not serviceable and must be modified in accordance with paragraph (e)(1) of this AD prior to further flight.

(h) Modification of the LPT case in accordance with paragraph (e)(2) of this AD establishes a life limit for LPT case P/N's 2083M38G01, 2083M38G02, 2083M38G03, 2083M38G04, 2083M38G05, 2083M38G06, 2083M38G07, and 2083M38G08, of 3,500 CIS since modification.

(i) Except as required in paragraph (j) of this AD, for engines with stage 2 LPT Waspalloy nozzle lock assemblies where one or more studs are found cracked by the inspections in paragraph (d) of this AD, but where no two cracked studs are located adjacent to each other, continued operation for an additional 25 hours time-in-service, maximum, is allowed prior to performing one of the corrective actions in paragraph (e) of this AD.

(j) For engines with two or more adjacent stage 2 LPT Waspalloy nozzle lock studs found cracked by the inspections in paragraph (d) of this AD, do one of the corrective actions in paragraph (e) of this AD prior to further flight.

Note 3: After installation of new design nozzle locks in accordance with paragraph (e)(1) of this AD, any solid borescope plug may be replaced with the standard borescope plug if the operator so chooses.

Terminating Action

(k) Accomplishment of Paragraphs 3.A. through 3.E.(2) of GE ASB CF6-50 72-A1201, dated December 22, 2000, or CF6-50 72-A1201, Revision 1, dated February 6, 2001 (modification of the LPT case and installation of new design nozzle locks per paragraph (e)(1) of this AD), is terminating action for the inspection requirements of this AD.

Alternative Methods of Inspection

(l) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 4: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(m) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Incorporation by Reference Material

(n) The actions required by this AD shall be done in accordance with the following General Electric Co. alert service bulletins and service bulletin:

Document	Pages	Revision	Date
CF6-50 72-A1197	1-28	Original	December 14, 2000
Total pages: 28			
CF6-50 72-A1201	1-21	Original	December 22, 2000
Total pages: 21			
CF6-50 72-A1201	1-22	1	February 6, 2001
Total pages: 22			
CF6-50 72-1203	1-9	Original	November 22, 2000
Total pages: 9			
CF6-50 72-1203	1-12	1	February 7, 2001
Total pages: 12			

The incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, fax (513) 672-8422. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(o) This amendment becomes effective on March 21, 2001.

FOR FURTHER INFORMATION CONTACT: Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781-238-7192, fax: 781-238-7199.

Issued in Burlington, Massachusetts, on February 23, 2001.

Jay J. Pardee, Manager, Engine and Propeller Directorate, Aircraft Certification Service.

BW 2001-05

**BOEING
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2001-05-05 BOEING: Amendment 39-12141. Docket 2001-NM-01-AD.

Applicability: Model 747 series airplanes, as listed in Boeing Service Bulletin 747-54A2206, Revision 1, dated February 22, 2001, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance per paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To find and fix discrepancies of the installation of the midspar fuse pins of the inboard and outboard strut, which could result in loss of the secondary retention capability of the fuse pins, migration of the fuse pins, and consequent loss of the strut and engine from the airplane; accomplish the following:

Inspections/Follow-On Actions

(a) At the latest of the times specified in paragraphs (a)(1) and (a)(2) of this AD, as applicable: Do a detailed visual inspection to find discrepancies (incorrect thread protrusion, which is less than two threads protruding from the nut between the nut and the secondary retention washer; incorrect gap between the fuse pin primary nut and secondary retention washer; cracked or broken torque stripe) of the installation of the midspar fuse pins of the inboard and outboard struts, per Figure 2 of Boeing Service Bulletin 747-54A2206, Revision 1, dated February 22, 2001.

(1) For airplanes not modified per one of the AD's listed in Table 1 of this AD: Do the inspection at the later of the times specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this AD:

(i) Before the accumulation of 8,000 total flight hours, or within 24 months since manufacture of the airplane, whichever occurs first.

(ii) Within 90 days after the effective date of this AD.

(2) For airplanes modified per one of the AD's listed in Table 1 of this AD: Do the inspection at the later of the times specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this AD. Table 1 follows:

Table 1

AD Number	Amendment Number
AD 95-10-16	39-9233
AD 95-13-05	39-9285
AD 95-13-06	39-9286
AD 95-13-07	39-9287
AD 99-10-10	39-11163

(i) Within 8,000 flight hours, or within 24 months since doing the modification, whichever occurs first.

(ii) Within 90 days after the effective date of this AD.

Note 2: Where there are differences between the AD and the service bulletin, the AD prevails.

Note 3: For the purposes of this AD, a detailed visual inspection is defined as: “An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required.”

(A) If no discrepancy is found: Repeat the inspection at intervals not to exceed 8,000 flight hours or 24 months, whichever is first, until you do the terminating modification specified in paragraph (b) of this AD.

(B) If any discrepancy is found, and the primary nut has backed off and contacts the secondary retention washer: Before further flight, do the terminating modification specified in paragraph (b) of this AD.

(C) If any discrepancy is found, and the primary nut does not contact the secondary retention washer: Repeat the inspection at intervals not to exceed 90 days. Within 18 months after the initial finding, or the effective date of this AD, whichever occurs later, do the terminating modification specified in paragraph (b) of this AD.

Note 4: Inspections accomplished prior to the effective date of this AD per Boeing Alert Service Bulletin 747-54A2206, dated October 19, 2000, are acceptable for compliance with the inspections required by paragraph (a) of this AD.

Optional Terminating Action

(b) Doing the terminating modification (replacement of the primary nut of the midspar fuse pin with a new nut, installation of torque stripe, a detailed visual inspection of the fuse pin threads for damage, and replacement, if necessary) per Figure 3 of Boeing Service Bulletin 747-54A2206, Revision 1, dated February 22, 2001, ends the repetitive inspections required by this AD.

Note 5: Accomplishment of the terminating action specified in Boeing Alert Service Bulletin 747-54A2206, dated October 19, 2000, is acceptable for compliance with the terminating action specified in paragraph (b) of this AD.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 6: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(d) Special flight permits may be issued per sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done per Boeing Service Bulletin 747-54A2206, Revision 1, dated February 22, 2001. This incorporation by reference was approved by the Director of the Federal Register per 5U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(f) This amendment becomes effective on March 21, 2001.

FOR FURTHER INFORMATION CONTACT: Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

Issued in Renton, Washington, on February 26, 2001.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.